AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An engine control apparatus for a vehicle comprising:

an overturn detecting unit for detecting overturning by an acceleration sensor having a detection ~~shaft~~ axis disposed laterally of a body of the vehicle; and

an engine stopping unit for stopping an engine of the vehicle in response to overturning detection by said overturn detecting unit,

wherein said overturn detecting unit is constructed to determine that the vehicle has overturned when a number of times said acceleration sensor detects average values of outputs exceeding an overturn threshold reaches a first preset value, and said overturn detecting unit is provided with a restoration unit for releasing the engine stop by said engine stopping unit when the number of times said acceleration sensor detects outputs below a restoration threshold reaches a second preset value after the overturning of the body of the vehicle is detected.

2. (Original) The engine control apparatus for a motorcycle according to claim 1, wherein said second preset value is smaller than said first preset value.

3. (Original) The engine control apparatus for a motorcycle according to claim 1, wherein said restoration threshold is set to a value smaller than said overturn threshold.

4. (Original) The engine control apparatus for a motorcycle according to claim 2, wherein said restoration threshold is set to a value smaller than said overturn threshold.

5. (Currently Amended) The engine control apparatus for a motorcycle according to claim 1, wherein a weight assigning unit assigns a lesser weight for a higher detected output from said acceleration sensor ~~to reflect the detected output on said average value~~ according to the deviation of the higher detected output of said acceleration sensor ~~with respect to~~ from said average value.

6. (Currently Amended) The engine control apparatus for a motorcycle according to claim 2, wherein a weight assigning unit assigns a lesser weight for [[the]] a higher detected output from said acceleration sensor ~~to reflect the detected output of said average value~~ according to the deviation of the higher detected output of said acceleration sensor ~~with respect to~~ from said average value.

7. (Currently Amended) The engine control apparatus for a motorcycle according to claim 3, wherein a weight assigning unit assigns a lesser weight for [[the]] a higher detected output from said acceleration sensor ~~to reflect the detected output on said average value~~ according to the deviation of the higher detected output of said acceleration sensor ~~with respect to~~ from said average value.

8. (Currently Amended) The engine control apparatus for a motorcycle according to claim 4, wherein a weight assigning unit assigns a lesser weight for [[the]] a higher detected output from said acceleration sensor ~~to reflect the detected output on said average value~~

according to the deviation of the higher detected output of said acceleration sensor ~~with respect to~~ from said average value.

9. (Currently Amended) The engine control apparatus for a motorcycle according to claim 1, wherein a light weight is assigned to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight is assigned to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

10. (Currently Amended) The engine control apparatus for a motorcycle according to claim 2, wherein a light weight is assigned to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight is assigned to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

11. (Currently Amended) The engine control apparatus for a motorcycle according to claim 3, wherein a light weight is assigned to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight is assigned to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

12. (Currently Amended) The engine control apparatus for a motorcycle according to claim 4, wherein a light weight is assigned to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight is assigned to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

13. (Currently Amended) A method of controlling an engine for a vehicle, comprising:

detecting ~~overturing~~ overturning of the vehicle by an acceleration sensor having a detection ~~shaft~~ axis disposed laterally of a body of the vehicle when a number of times said acceleration sensor detects average values of outputs exceeding an overturn threshold reaches a first preset value;

~~stopping an engine of the vehicle in response to overturning detection by said overturn detecting unit;~~

~~determining that the vehicle has overturned when a number of times said acceleration sensor detects average values of outputs exceeding an overturn threshold reaches a first preset value;~~

stopping an engine of the vehicle when it has been detected that the vehicle has overturned;

releasing the engine stop ~~by said engine stopping unit~~ when the number of times said acceleration sensor detects outputs below a restoration threshold reaches a second preset value after the overturning of the body of the vehicle is detected.

14. (Original) The method of controlling an engine for a vehicle according to claim 13, further comprising the step of setting said second preset value smaller than said first preset value.

15. (Original) The method of controlling an engine for a vehicle according to claim 13, further comprising the step of setting said restoration threshold to a value smaller than said overturn threshold.

16. (Original) The method of controlling an engine for a vehicle according to claim 14, further comprising the step of setting said restoration threshold to a value smaller than said overturn threshold.

17. (Currently Amended) The method of controlling an engine for a vehicle according to claim 13, further comprising the step of assigning a light weight to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

18. (Currently Amended) The method of controlling an engine for a vehicle according to claim 14, further comprising the step of assigning a light weight to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average

value of the acceleration sensor, and a heavy weight to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

19. (Currently Amended) The method of controlling an engine for a vehicle according to claim 15, further comprising the step of assigning a light weight to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.

20. (Currently Amended) The method of controlling an engine for a vehicle according to claim 16, further comprising the step of assigning a light weight to a detected ~~value~~ output from the acceleration sensor that is largely deviated from the ~~averaged output~~ average value of the acceleration sensor, and a heavy weight to a detected ~~value~~ output from the acceleration sensor that is less deviated from the ~~averaged output~~ average value.